71552 - In-situ Laser Fenestrations of Visceral Endografts (InLoVE) Mid-term outcomes from a multicenter study

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Introduction: Emergent complex abdominal aortic diseases are challenging to treat. During In-situ laser fenestration (ISLF) aortic branches are covered and then restored with in-situ fenestration of the stentgraft with promising mid-term results1. The aim of this study was to examine our mid-term outcome of ISLF in visceral aortic pathology.

Method: Retrospective multicenter study on consecutive ISLF cases of visceral aortic stent-grafts 2018-2023 in three aortic centers. Technical success was defined as a successful vascularization with bridging stent without any type 3 endoleak.

Result: A total of 65 ISLFs were performed in 34 patients, mean age 74 years. The procedure was performed in an acute setting in 79%. Pre-stenting of all target vessels was performed on 29 patients (85%). Four patients (12%) died within 30 days, all presented with a rupture. Technical success was achieved in 61/65 ISLF (94%). All failed cannulations were in renals, three due to difficult angulation and one dissected during cannulation. Median follow up was 464 days. Cumulative survival at six months, one year and two years was 88%, 80% and 72%. There were in total six (9%) target vessel instability detected: Three (5%) type III endoleaks, and three (5%) stent stenosis, all requiring relining. Freedom from target vessel instability at six months till end of follow up was 90% (figure 1).

Discussion: ISLF is a promising tool for emergent endovascular procedures in complex anatomies.

On latest follow-up scan, all successfully deployed ISLF bridging stents were patent without signs of endoleak type 3.